

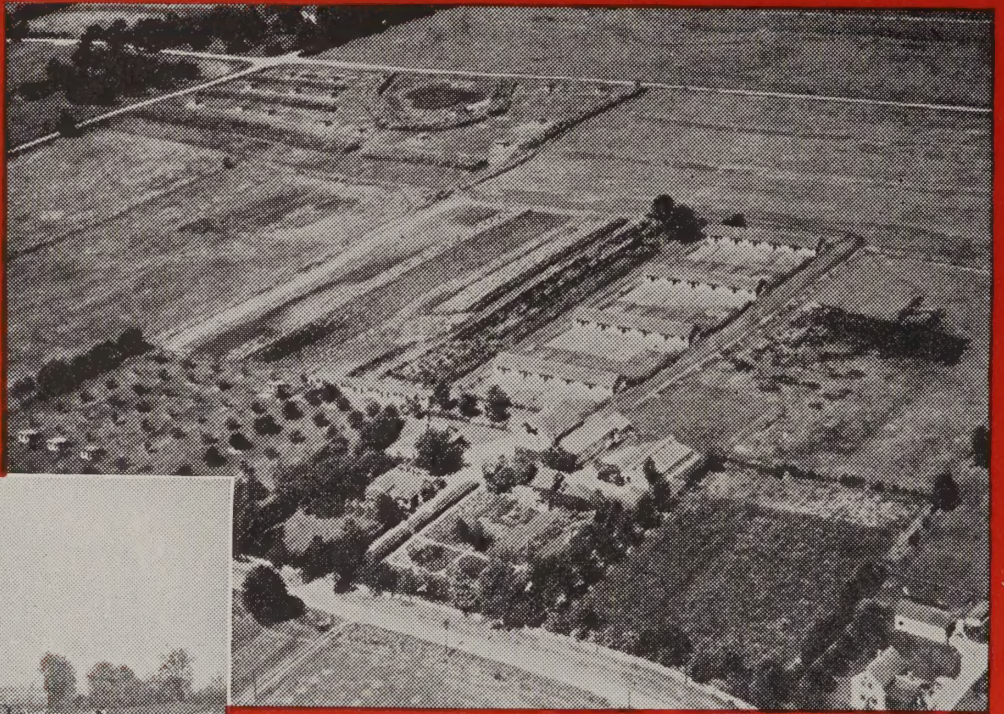
FULO-PEP

THE EASY
ECONOMICAL WAY
TO RAISE CHICKS



Published by **The Quaker Oats Company** Chicago U.S.A.

Where Ful-O-Pep Feeds are constantly tested under practical farm conditions



Our poultry research farm consists of approximately 30 acres, with housing accommodations for 2,200 layers and 8,000 chicks.

***You Are In-
vited to Visit
the Farm***



The Ful-O-Pep Experimental Farm has pioneered another outstanding improvement in poultry nutrition. We are proud to have pioneered the use of Cod Liver Oil, Cod Liver Meal, Molasses, Oat Feeding, Restricted Feeding, and now the use of Concentrated Spring Range. We are constantly seeking ways to further improve Ful-O-Pep Feeds and the Ful-O-Pep Feeding Program so as to reduce your feeding costs and in turn increase your profits from the flock.



A Well Developed Flock on Pleasant View Poultry Farm, Clarence, Iowa

How You May Save in Feed Cost

MOST poultrymen spend altogether too much money for feed in raising their pullets. They never allow their pullets to get hungry. They keep feed before the young birds out on range all the time. This is hard on the pocket-book and isn't good for the birds.

A number of years ago poultrymen started a race to see who could bring his pullets into egg production in the shortest period of time. They got into the habit of heavy feeding of rations that were high in protein. As a result pullets would come into production when they were four or five months old. Not only was egg size small, as a rule, but a good many of these pullets would die before they were a year old. This is one of the greatest economic reasons for the losses sustained by the poultry industry.

*Avoid
Early
Maturity*

No other live stock breeder would think of raising his

CREDITS FUL-O-PEP FOR THEIR WINNINGS "We just can't get along without the Ful-O-Pep Feeds. Have tried different feeds but can't get the results that we get with Ful-O-Pep and their feeding program. We believe feeding Ful-O-Pep Feeds is the reason we have won so many blue ribbons on our S. C. White Leghorn Stock and Eggs at all the leading shows." Wm. Goldsmidt, Pleasant View Poultry Farm, Clarence, Iowa.

*Restrict
Their
Feed*

animals this way. How long do you suppose a dairyman could stay in business if he were to keep a high protein ration in front of the young stock all the time after they were four or five months old. The dairyman knows from long experience that lots of pasture and little feed will raise a very much sounder animal than a lot of feed and little pasture.

On our experimental farm we have been restricting the feed more and more each year for the past four years in raising the pullets. We have been raising better and better pullets each year. Instead of the pullets being smaller, they are actually bigger birds; instead of being weaker, they are stronger and in turn do a better job in the laying house.

The usual method of feeding heavily on mash is expensive. If it meant bigger, healthier, stronger pullets it might be justified, but we are confident, after the research work done at our own farm and seeing our program used on hundreds of farms, that the quality of the birds is improved when the feed is restricted during the growing period.

*Hold
Pullets
Back*

By restricted feeding, it is fairly easy to hold the pullets back from coming into production until they are six to seven months old. As a matter of fact, self-preservation is the first law of nature and reproduction comes second. If birds do not get enough to eat to maintain their own body requirements and lay eggs, they will not come into production. You can postpone laying in a flock of pullets practically as long as you desire.

The Ful-O-Pep plan of restricted feeding, after the chicks are six to eight weeks old, not only produces bigger pullets but pullets that are relatively free from parasites, and they begin to lay medium sized eggs practically with their first egg. Moreover, it has resulted in a tremendous saving to thousands of poultrymen. Many, in fact, have reported a reduction up to 50% in feed costs after the chicks are eight weeks old.

*Raise
Better
Pullets*

The past year on our research farm at Libertyville, for a period of over two months, with a comparatively good grass range, we restricted the feed as follows: Every other day the pullets had a chance to eat Ful-O-Pep Growing Mash and whole oats for an hour or two in the morning and at night they were fed as much Ful-O-Pep Coarse Chick Feed or Scratch Grains as they would clean up in ten to fifteen minutes. On the alternate days we fed only what oats they would clean up in ten to fifteen minutes at night. These birds lived primarily on grass and bugs.

We saved a lot of money in raising these pullets and the hundreds of poultrymen who visited the farm during the summer will testify that they were an exceptionally large,



Sleighton Farm School for Girls, Darlington, Pa., Own these New Hampshire Reds

fine-lot of pullets. Furthermore, because their feed was restricted, they were tame. When you keep feed in front of the birds all the time they seem to conclude that the feed grows in the hopper and do not associate the feeder with the feed—thus show no friendship or gratitude toward him. With the feed hoppers empty a lot of the time they appreciate who feeds them and in turn become quite tame or friendly. This is of great value after the birds are housed because it reduces mortality due to internal injuries and makes for more even production.

*Let the
Birds Get
Hungry*

With birds raised in confinement or on bare ground it isn't possible to restrict the feed to the extent just discussed. We believe though that you will raise much better pullets by letting the hoppers run empty three or four hours a day after the pullets are six to eight week old. You have to use your own good judgment.

The restricted feeding of young stock is no doubt the oldest feeding program in the poultry industry. That is the

WOULD NOT CHANGE FROM FUL-O-PEP *"We have had experience with practically all of the commercial feeds and were still seeking something more satisfactory when we started to use Ful-O-Pep. Results for 2 years have proved that there is no occasion for seeking further. We feel that we have every reason to be entirely satisfied with all of the Ful-O-Pep products we have used and would not consider changing from what we have found to be an excellent feed." Nina M. Steele, Sleighton Farm School for Girls, Darlington, Pennsylvania.*



A Good Flock of White Leghorns Raised by Louis Vanzago, Hollywood, Florida

way farmers raised their chickens for hundreds of years. These farm raised birds are usually big, strong, healthy birds. Best of all they didn't cost the farmer much of anything to raise.

*Ful-O-Pep
Economical
to Feed*

Ful-O-Pep Chick Starter and Ful-O-Pep Growing Mash are particularly adaptable to restricted feeding. These mashes are built around oatmeal and are designed to grow big, sound, capable pullets on a low mash consumption basis. And what a difference it makes in your business if you can raise the pullets at an approximate cost of fifty cents per bird, as many poultrymen are doing to their great satisfaction following the Ful-O-Pep Feeding Program.

Until you have actually tried Ful-O-Pep Mashes and fed them the Ful-O-Pep Way you don't appreciate how inexpensively good pullets may be raised. You may save as much as $\frac{1}{3}$ to $\frac{1}{2}$ in your feed cost and at the same time raise big, robust birds with stamina to lay through several full seasons to bring you extra profits. Learn more about these economical feeds and the save-on-feed plan in the pages that follow.

MAKES MONEY FEEDING FUL-O-PEP "I am a commercial poultryman and have a flock of about 1,200 hens and pullets. We raise our chicks with about a 5% mortality and our laying house mortality runs about 10%. We are not bothered with half feathered birds, prolapsis and pick outs or other chicken diseases we hear so much about. Since 1933, on your feeds we have made a profit above feed cost every month without exception. Needless to say we are still feeding Ful-O-Pep and expect to continue to do so." Louis Vanzago, Hollywood, Florida.



Pelster Poultry Farm, New Haven, Missouri, Uses Ful-O-Pep Feeds

Concentrated Spring Range

HAVE you ever watched a flock of pullets in a wheat field, when the wheat was four to five inches high? Have you ever had chickens out on a lawn in the early spring when the grass is green and tender? Have you ever noticed how tightly feathered these birds were and how they sang and cackled with joy? It's really a beautiful sight to any poultryman.

We always thought the reason we enjoyed seeing the pullets on the green grass was because of the mixture of colors. Unquestionably the health and well-being of the birds had a great deal to do with the beauty of the setting.

*Has Real
Nutritive
Value*

One of the most remarkable discoveries of recent years is the feeding value of tender unjointed cereal grasses for poultry. How could we be so blind all these years with green grass growing all around, with chickens crazy to eat it, with live stock thriving on it, and the poultry industry practically

RESULTS ON FUL-O-PEP BEYOND EXPECTATIONS "This was our first season that we fed your Starting and Developer Mashers and must say that the results have been beyond our expectations. We always were bothered with feather picking in baby chicks after the first two weeks but since we fed Ful-O-Pep we have not had a single case. So thoroughly are we convinced that it is in the feed that we would not feed any other feed hereafter. We are housing approximately 2,000 of the finest pullets we have raised in years. We operate a poultry breeding farm and hatchery." Louis A. Pelster, Pelster Poultry Farm, New Haven, Missouri.

disregarding it. Some people even went so far as to say you didn't have to feed chickens any form of greenstuff.

*Rich in
Essential
Vitamins*

Mother Nature actually stores in tender succulent grasses a wealth of vitamins, proteins and minerals required for the growth of the young plant. The important point we must not lose sight of is that there is such a tremendous difference in nutritive value of grasses before and after they are jointed. Up to the point when the first joint forms in the stem, grasses are the richest natural combination known to science of vitamins A, B₁, C, G, K and the important grass juice factor and valuable proteins. Once the grass joints the fiber content rapidly increases and it no longer is a vitamin storehouse.

*Helpful
With Birds
on Range*

Science has found a way to preserve these tender cereal grasses for year around use and we are incorporating them in Ful-O-Pep Mashers. The chicks that you start in confinement or grow in bare lots can now get many of the health and feeding benefits of fresh, green spring pasture. Even if a range is available there are only a few weeks in the spring and in the fall that the grasses are at their best so it will likewise be helpful to birds on range.

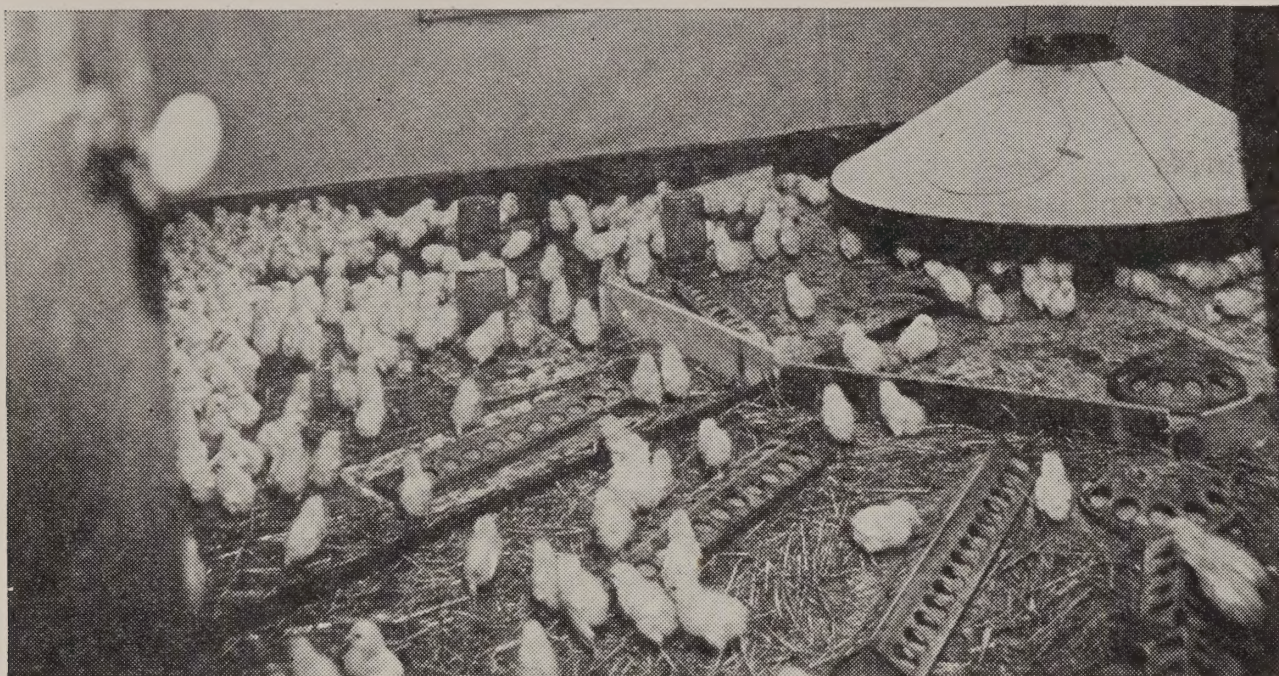
To this outstanding new feed ingredient in Ful-O-Pep Mashers, we have given the trade mark name Concentrated Spring Range. It is a combination of oats, wheat, barley, rye and sudan grasses grown on rich fertile land and cut before they joint. These grasses are harvested when they are in the very pink of condition and dehydrated so as to preserve the food nutrients.

We do not think there has ever been a discovery that contributed more to the raising of big, healthy, capable pullets. We believe that in Ful-O-Pep Mashers we have the finest combination of food nutrients available.

*Ful-O-Pep
Is Still
Better*

If you have used and liked Ful-O-Pep Chick Starter and Ful-O-Pep Growing Mash before, we feel confident you are going to like them still better with Concentrated Spring Range in every bag of Ful-O-Pep. We know from experience that as good as Ful-O-Pep Mashers have been in the past, the addition of these cereal grasses makes them better, whether it be for young stock or mature birds. We feel sure that Concentrated Spring Range will help you enjoy greater profits—greater success in raising poultry.

FOUND FUL-O-PEP SUPERIOR *"During our experience in raising chicks we have tried various feeds to find one that would produce the best results at the lowest possible cost. We are glad to say that we have found the answer in Ful-O-Pep and we advise all our chick customers to use it for growth, productivity and economy. Our decision is based on facts obtained from records of very close checking. One flock of 500 pullets this year proves beyond a doubt the value of Ful-O-Pep." E. C. Sine, Hambleton, West Virginia.*



A Healthy Bunch of Chicks on the Farm of E. C. Sine, Hambleton, West Virginia

Simple Rules in Brooding

IF THERE is one place in which we need to be moderate, it is in brooding the chicks. Most poultrymen overheat, overcrowd, overfeed and overconfine their chicks. Of these, overheating apparently is the most common and the most serious.

Get your ideas of temperature from the mother hen. All she does is hover over them for short periods of time. A good share of the day the chicks are running around, scratching and looking for something to eat. What plump little bodies they have and how fast they feather.

The first week of brooding the temperature for the chicks should be about 90° under the hover. This may be lowered about 1 degree a day so they will be happy in a temperature of 65 to 70 degrees when three to four weeks old.

Instead of trying to heat the entire house to a uniform temperature, provide some sort of a curtain around the brooder stove hover so that you retain the heat under the hover.

For the first few days it's wise to have some type of shield around the heater so as to break up any floor drafts and to teach the chicks where to go to warm up. At the end of three or four days permit them to go into the cold parts of the brooder. After the first week the temperature may gradually be lowered.

For years poultrymen had the idea the number of chicks that could be put in a brooder was determined by the number

*Avoid
Overheating
of Chicks*

*Provide
Proper
Ventilation*

that could be crowded around the stove the first couple of weeks. They overlooked what would happen when the chicks were a little older and needed to move away from the stove. Likewise, few poultrymen increase their hopper space for chicks in the proportion needed; nor do they increase the ventilation in proportion to age of the chicks.

Lack of proper ventilation becomes serious when the pullets get to be ten to twelve weeks old. Pullets that are well feathered and will roost out in the open are really the cream of the crop, because they have all the air that they need and all the room they want.

Get the chicks outdoors when they are a week or two weeks old if it is at all possible. You cannot, of course, put them out in a howling blizzard, but if the weather at all permits they should be out in the cold air. The sooner they get on the ground, the safer they are, and the stronger and healthier they grow.

*Get the
Chicks
Outdoors*

We think it is far better for the chicks to get out on frozen ground than to be confined in the brooder house or to be allowed to run out on porches. We very much prefer the contact with the ground, even if it is necessary to sweep the snow away.

Chicks that are allowed to run outdoors at an early age get cold rather quickly, consequently, hurry back to the heater while they still know the way. If you wait until the chicks are six or eight weeks old they do not have the sense to go back in and warm up until they are quite cold and by that time they have forgotten their way back in the house. The result is they crowd in a corner and get into a good deal of trouble. You practically never find that happening with young chicks.

*Supply
a Grass
Range*

Many poultrymen feel that for sanitary reasons they need to keep their chicks confined until they are half grown. From our experience and observation this is utterly wrong. We raise far healthier chicks by getting them outdoors at an early age, even if it is ground where chickens have been on for years and years. We would much prefer raising pullets on ground where chickens have been running year after year than we would attempt to raise them in confinement. As a matter of fact, many of the finest pullets we have ever seen were raised on ground that had been used continuously for years.

We feel it is important that the range be in grass and that a succession of cereal grasses be sown where this is practical. A natural grass sod also makes an excellent range for chicks.

Get your chicks to roost at an early age. Put sloping roosts in the house by the time the chicks are four or five weeks old. They are then inclined to climb up on the roosts to the warmer air. This is especially true if you have the



Harry F. Sanborn, West Baldwin, Maine, Owns this Fine Flock of Pullets

brooder temperature low. Once the chicks have learned to roost, there is a lot less danger from crowding or sweating.

Be sure the roosts are smooth and be careful about putting disinfectants on them. Rough roosts cause blisters and sore feet while some disinfectants especially if not thoroughly dry may burn the skin and produce blisters on the breast bone.

Most poultrymen feed entirely too much. They are literally wasting feed. Overfeeding doesn't help the chicks grow. It causes them to become inactive and in turn constipated. Overfeeding chicks is just as bad as overfeeding any other animal.

*Avoid
Overfeeding
Young Stock*

We rarely do much overfeeding the first week or two, but as they get older it becomes easier and easier to do. Some chickens are just stupid enough to stand up to a hopper and eat all day. They will eat better, are far healthier and more active if they are allowed to get hungry a couple of times a day. Let's use just good common sense with our chickens, the same as we do with other kinds of stock.

FED FUL-O-PEP 10 YEARS *"This is the 10th year without a break that I have fed Ful-O-Pep Chick Starter and as I expected the chicks have done well and kept growing right from the start. I bought 2,200 in two lots during January and March and to date have lost less than 66 chicks. I have found that Ful-O-Pep Starter can be depended upon to produce large, full feathered chickens all uniformly good and evenly grown. There just aren't any runts. I have always found Ful-O-Pep Mashers always the same and I can always rely on them to meet my expectations for growth and egg Production." Harry F. Sanborn, Maple Shade Poultry Farm, West Baldwin, Maine.*



Marion Northrop, West Albany, N. Y. Feeds Ful-O-Pep

Oats for Sound Growth

EACH year as the experiment stations do more and more work with oats we more fully appreciate the valuable properties found in oats and not found in the other grains. For a long time we have known that oats would produce better bone, flesh, and feathers than other grains and now we are beginning to find out some of the reasons.

Oats are rich in Vitamin B₁, or Thiamin. When insufficient Vitamin B₁, or Thiamin, is eaten the nerves are affected. A lack of this vitamin also leads to constipation.

*Oats
Rich in
Manganese*

Oats have been found to be particularly rich in manganese. Chickens grown on wire floors and fed rations deficient in this mineral develop crooked legs or slipped tendons. A ration for hens lacking in manganese produces eggs that will not hatch. The embryos are quite apt to turn into various monstrosities, dwarfs, etc.

According to the work of Professor Mangold of Germany, oats stimulate a higher degree of acid in the gizzard than other grains. The acidity of the gizzard we believe is unquestionably a protection against parasitic invasion.

It has been pointed out that oats grows a better quality of bone. Since the red corpuscles are formed in the marrow of the bone, it is reasonable to assume that chickens getting a fair amount of oats not only have better bone but better blood.

Careful study of the different grains has shown that oat fed birds do not develop the cannibalistic and feather picking tendencies that often times develop when fed on other grains. If you raise your birds on the Ful-O-Pep Feeding Program with Ful-O-Pep Mash and hopper feed oats, we are confident you will not need any kind of a mechanical contrivance, to keep birds from eating each other.

*Oats Help
Prevent
Cannibalism*

It has been a long established fact from the standpoint of live stock that feeding oats meant better flesh and corn more fat. The poultryman is just beginning to realize this fact. Oats produce more meat over the breast while corn deposits fat in the abdomen.

Since oats do not deposit a lot of fat in the abdomen, an oat fed flock will have much less trouble from blow outs. Furthermore, birds that do not have a large amount of fat in the abdomen and around the heart will live longer, lay better and be far more profitable.

If you will study the Ful-O-Pep Feeding program you will realize that after the chicks are eight weeks old and up to laying age practically half of their feed is whole oats. And it does a real job of building big, strong, sturdy pullets that are fully feathered and well fleshed. Once you try Ful-O-Pep Mash with their liberal oatmeal content and follow the Ful-O-Pep Feeding Program, you will never go back to any other feeding system.

*Ful-O-Pep
Way Builds
Big Pullets*

There is one catch in the feeding of whole oats. You really must feed grit. More than that, a granite grit which the chickens will eat freely. We know that people say chickens don't need grit. On the same basis you and I don't need teeth. We can get along by eating soup and hash without teeth. You can feed hens on all mash and keep them alive without grit, but if you are looking for sound health and maximum egg production the birds need more than just mash.

*Granite
Grit Is
Important*

We have found so much less mortality and so much less worry in the poultry houses when a combination of granite grit and whole oats are fed that we wouldn't consider raising chickens without this profit making combination.

RECOMMENDS FUL-O-PEP "Because I had found Ful-O-Pep Egg Mash so satisfactory I decided to use Ful-O-Pep Chick Starter for my baby chicks. This was about ten years ago and I have been using it ever since, because I found it very economical both from the standpoint of the feed used and the decreased mortality. Then too the Ful-O-Pep method of feeding growing chicks produces pullets that are evenly developed, firm fleshed and capable of the strain of heavy production. When results are satisfactory feed always plays a part in making them so, therefore I fully recommend Ful-O-Pep Feeds." Marion Northrop, West Albany, New York.



These Well Developed Pullets Belong to G. S. Wallace, Doylestown, Ohio

Proper Litter Important

WE ARE beginning to appreciate that litter is one of the important parts of a poultry ration. When a non-fibrous material is used for litter in the brooder house, we apparently run into a good many difficulties that we do not have with a fibrous litter on the floor.

*Oat Hulls
Prove Most
Satisfactory*

Of the various types of litter used, oat hulls really prove the most satisfactory in our experience. The chicks can eat them and thus add to their ration a most desirable form of fiber. As a matter of fact, gizzard ulcers seem to be greatly helped by the feeding of oat hulls. This in turn helps to stop or prevent many other chick troubles.

Oat hulls are quite inexpensive to use as litter for chicks the first three or four weeks. We find approximately a fifty pound bag of oat hull litter is needed for each one hundred square feet of floor space. The chicks really have a big time kicking the litter over and finding things they want to eat.

While we are not in a position to say that oat hull litter is a preventative for the bloody type of coccidiosis, we do know that while we have used it as litter on our Experimental Farm along with granite grit, our birds have been remarkably free from coccidiosis.

Provide Range for Pullets

IF PULLETS could only talk, they would probably ask for "Home on the Range, where skies are not cloudy all day."

The finest pullets we have ever seen were raised on a good grass range. The cheapest way that anyone has ever found to raise pullets is on a good grass range.

*Get the
Pullets on
Range*

When the grass is fairly young and tender and the bugs are plentiful, growing pullets need very little more in the way of feed. Young, tender grass contains over 20% protein and is fairly low in fiber, high in digestability and is nature's storehouse of vitamins. Many poultrymen who have lots of grass have not been taking advantage of their opportunity to grow sound, capable pullets this simple, economical way.

Some poultrymen feel that unless they can change the range every year, they dare not put their pullets out on range. We know that it is good for all crops to be rotated but we do not see any greater necessity for rotating the pasture for chickens than the pasture for horses or other livestock. Many of the finest chickens have been raised on a range which was used for that purpose year after year.

*Rotating
Range Not
Necessary*

The main question in keeping birds on the same range year after year is the quality of the sod. If you cannot maintain a good, strong, luxuriant sod, we would suggest growing a succession of cereal grasses. In other words grow a patch of wheat, oats or barley as long as the weather will permit.

Where the young stock is running on a good grass range we would recommend using Ful-O-Pep Developer after the birds are eight to ten weeks of age. Ful-O-Pep Developer is a low protein mash that was specially built for raising profitable pullets on a good grass range. It will encourage slower maturity and build bigger frames so that the pullets can lay lots of big eggs when you put them in the laying house. Do not use Developer unless there is a good grass range.

*Encourages
Slower
Maturity*

If you will compare pullets raised on a good grass range with birds raised in confinement, we believe you will agree with us as to the necessity of getting them out on range. Furthermore, it seems that the earlier we can get chicks out on the ground, the better it is for them.

FIND FUL-O-PEP FEEDS RIGHT "Three years ago your service man and dealer called upon me and explained your Ful-O-Pep Feeds and your plan of growing chicks. It sounded good to me and I decided to try it on a comparison basis using the feed I had used the previous year for the test. I can only praise Ful-O-Pep Feeds, for my mortality has decreased, my birds carry better size and best of all they live and lay after they are mature. My experience with Ful-O-Pep Feeds proves to me that both your feeds and your plan are right." G. S. Wallace, Doylestown, Ohio.

Save Up To $\frac{1}{3}$ to $\frac{1}{2}$ in Feeding Costs The Ful-O-Pep Way!



I LIKE
THIS FEED!

YOU SHOULD!
IT IS BUILT
AROUND
OATMEAL.

YES, AND IT
SUPPLIES THE
BENEFITS OF
FRESH GREEN
PASTURE.

NO WONDER
WE'RE ALL
SO GROWING
AND BIG
STRONG.

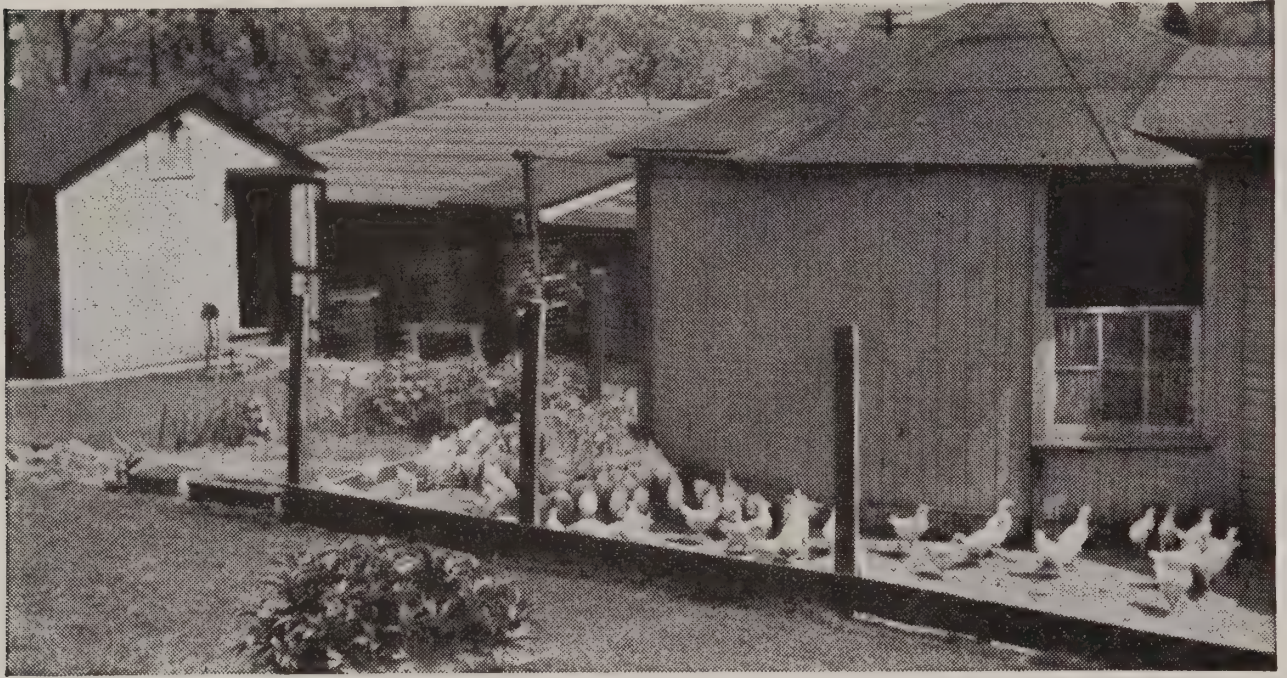
NO TIME TO
WASTE! WE
HAVE WORK
TO DO!

I REALLY FEEL
BETTER, HAVING
MY OWN FEED

SAY! THE BOSS
IS MIGHTY
PROUD
OF US

WHY NOT!
WE ARE SAVING
HIM FEED AND
MONEY SOUND
MAKING GROWTH!
TOO!

All Ful-O-Pep Mashers Now Contain Concentrated Spring Range



A Healthy, Uniform Flock Owned by S. W. Eckenrode, Saltsburg, Pa.

The Ful-O-Pep Plan of Feeding

THE Ful-O-Pep Plan of Feeding is designed to grow large sized, firm-bodied, sound-boned, healthy pullets that will live and lay for several years. We do not believe in nor recommend feeding heavily of a high protein mash which will mature pullets in three or four months' time. We know that this means lower vitality, shorter life, smaller birds, and smaller eggs.

*Give
Chicks
Grain*

Have feed ready in hoppers, trays or flats when the chicks are put in the brooder. For the first few days they should be fed mostly on Ful-O-Pep Fine Chick Feed plus fine granite grit and charcoal. These may be sprinkled over the Ful-O-Pep Chick Starter. Chicks learn to eat grain more

CONSISTENT FUL-O-PEP FEEDER FOR 12 YEARS "You may be interested in the fact that I have consistently fed Ful-O-Pep Feeds over a period of 12 years. From time to time I have experimented with other feeds, both branded and the so-called 'home mixers' but have always returned to 'Pep more convinced than ever of the quality of your Mashers, and also the soundness of your feeding program; I am always sure of a fine flock of pullets, which means high egg production. As a matter of fact, for many years I have had a ready market and received top prices for my Ful-O-Pep eggs." S. W. Eckenrode, Saltsburg, Pennsylvania.

readily than they do mash. Also many chicks are less inclined to paste up and it usually results in a more uniform flock. After the first two days, keep Ful-O-Pep Chick Starter in front of the chicks all the time and feed Ful-O-Pep Fine Chick Feed at night.

*Feed the
Chicks
on Arrival*

As soon as the chicks are received or can be taken out of the incubator, feed them. Do not starve chicks for twenty-four hours or longer. Be sure to provide plenty of hopper space, flats or trays, so all the chicks can eat. Have fresh, lukewarm water available. Cold water may severely injure the chicks and should be avoided.

Sprinkle some fine granite grit, or even coarse, sharp sand and charcoal on top of the Ful-O-Pep Chick Starter each day as you fill the hoppers. Continue feeding the Fine Chick Feed on top of the mash until the chicks are three weeks old. At that time change to Ful-O-Pep Coarse Chick Feed and begin feeding the Coarse Chick Feed in the litter or else on the ground at night.

We want the chicks to learn the difference between feed and litter; in fact we want the chicks to eat some litter. It is very much better for the chickens to eat a certain amount of fiber out of the litter than to pick feathers from each other. Litter is an important item in the feed. Where straw or oat hulls are used as litter, there is much less tendency for chicks to get into trouble from gizzard ulcers.

*Supply
Granite
Grit*

When you change to Ful-O-Pep Coarse Chick Feed be sure that you change to medium size granite grit. Give the birds just as big a grit as they can handle. Also, be sure that the grit is a hard acid insoluble grit, for the so-called limestone grit is ineffective for grinding purposes.

At six weeks of age, change the chicks from Ful-O-Pep Chick Starter to Ful-O-Pep Growing Mash, and continue feeding the Coarse Chick Feed in the litter at night. When six to eight weeks old put in a hopper of whole oats.

The hopper of oats must be smooth oats so that the birds can eat them readily. The heavy, thick hulled oats with long awns or barbs cause birds a good deal of distress when they stick in their throats. The small, thin hulled cereal oats, such as our Akron, Imperial or Jemima Oats are ideal for this use. Clipped oats are also satisfactory.

*Hopper
Feed
the Oats*

When the birds are six weeks old or by the time they weigh a pound, the granite grit should be changed from medium or coarse chick sized grit to hen sized grit. Chickens

*On Range
Feed
Developer*

cannot properly take care of whole oats unless they have large enough grit to do the grinding. Oats require a great deal more grinding or pressure than other grains. Only an acid insoluble grit such as granite grit can be expected to work satisfactorily when feeding whole oats.

If the range is a good sod of tender succulent grass, or if it is possible to keep a succession of cereal grasses growing such as wheat or oats, change from Ful-O-Pep Growing Mash to Ful-O-Pep Developer when the chicks are eight or ten weeks old. Ful-O-Pep Developer is intended purely as a range feed for growing stock. It should not be used when the range is poor or when birds are fed in confinement or on bare lots.

*Feed
Grain
Liberally*

When the birds are running out on range it is more desirable to feed the Ful-O-Pep Coarse Chick Feed out on the ground, rather than attempt to throw the grain in the litter in the colony house. The amount of grain to give will vary from day to day depending upon the weather. In hot weather the birds will not eat as much grain as in cold weather. You will have to use your judgment from day to day as to the amount to feed the birds. Feed what they will clean up in ten to fifteen minutes.

By the time the pullets are ten to twelve weeks old they should eat at least two or three times as much grain as mash. When referring to grain we mean the combination of the whole oats in the hopper and Ful-O-Pep Coarse Chick Feed thrown on the ground. This heavy grain feeding promotes slower growth, insures better egg size, and reduces trouble from worms.

In hot weather be sure to keep a supply of fresh water in the shade near the feed. Do not put any disinfectant in the drinking water at any time. You cannot disinfect a chicken's insides. The birds object to some disinfectants and in turn will not drink enough water. Constipation is the result, which is far worse than any possible advantage gained using the disinfectant. It is quite all right to disinfect the drinking fountains, but don't put the disinfectant in the water.

*Take Two
Holidays
a Week*

When the chicks are eight to ten weeks old and are on a fair range, restrict mash and oats feeding to two or three hours in the morning. Put in the hoppers what they will clean up in that time. After the chicks are ten weeks old and are running on a good grass range don't feed anything except a light feeding of oats at night two days a week. For example, feed oats only, on Wednesday and Sunday. We believe that the birds will develop a more active condition of the intestines and be stronger.



E. J. LaPlant Poultry Farm & Hatchery, Green Bay, Wisconsin

Most poultry men keep feed in front of the birds too much of the time. Restricted feeding, applied sensibly, will result in raising big, capable pullets on less feed.

Restricted feeding is the best way of keeping the chicks active and keeping them from being constipated. It ordinarily requires keeping the feed away from the chicks three or four hours before they get really hungry. We think this is the most effective way of cleaning them out and whetting up their appetites. While it is common to flush the birds out at the first signs of constipation by using blackstrap molasses at the rate of a pint to four gallons of water given as the sole drink for one day, we think it is unnecessary if the feed is restricted and better results will be obtained.

A month before the pullets are housed or when they are six months old and eggs are desired, change from Ful-O-Pep Developer or Ful-O-Pep Growing Mash to Ful-O-Pep Egg-

*Hungry
Chicks Are
More Active*

CUSTOMERS ASTONISHED AT ECONOMY OF FUL-O-PEP "Having been in the Hatchery and Poultry business 33 years I have used several makes of feed, some much higher in price than yours, but can frankly say that I never raised and sold as fine pullets and four week old cockerels until we used Ful-O-Pep Feeds. Out of 387 customers who bought four weeks to three months old pullets and cockerels I have not had one complaint to date. This is now September 14th. All of our customers have followed the Ful-O-Pep plan in feeding and are astonished how economically they have raised their pullets." E. J. LaPlant Poultry Farm & Hatchery, Green Bay, Wisconsin.



White Rocks Raised by W. D. Lett, Washington, Indiana. Note the Fine Grass Range

Breeder Mash. It contains all of the essential egg building materials. Keep Ful-O-Pep Egg-Breeder Mash before the birds all the time. In other words put the pullets on full feed a month before they are housed. Begin feeding 40% Ful-O-Pep Egg-Breeder Mash, 40% oats, and 20% Ful-O-Pep Scratch Grain.

*Feeding
Determines
Future*

Feeding isn't everything in getting high production, but it certainly plays an important part. The method outlined here is the one many of the breeders have been using who have been making egg laying contest history. It is far easier to get lots of big eggs from pullets that have had a chance to develop properly and build a reserve before coming into production. Best of all, this method means lowered feed costs.

Ful-O-Pep Mashies are ready to feed as you find them in the blue and white striped sack—for best results feed them according to the Ful-O-Pep Feeding Plan.

FOR FEEDING BROILERS SEND FOR OUR SPECIAL BROILER FOLDER. It's free. Just write to The Quaker Oats Company, Chicago, Ill.

FUL-O-PEP PUT TO TEST *"It has been apparent in tests with pedigreed White Rocks on our farm this year that the Ful-O-Pep group from the start looked better in body size, feather growth and condition. Also less Ful-O-Pep feed satisfied all of their growing needs. We are optimistic as to what these birds grown on the Ful-O-Pep system will do in the laying house this winter. Our customers too, are well pleased with your feeds and feeding program." W. D. Lett, Lett's Maple Valley Farm, Washington, Indiana.*

Produces Record Hens

WE ARE mighty proud of the records Ful-O-Pep raised birds have made in the Egg Laying Contests over a period of years.

A Rhode Island Red hen owned by W. C. Mullins, Handley, Texas, was the highest record hen in the Texas Egg Laying Contest this last year. She laid 341 eggs for a total of 367.85 points in 51 weeks. That is the highest record ever made by a heavy breed at the Texas Contest, and only .7 of a point behind the World's Record point total for heavy breeds.

*High Hen
at Texas
Contest*

The W. C. Mullins entry of four pens of Leghorns and two pens of Reds in the Texas Contest also made an astonishing livability record. Mr. Mullins lost only one bird out of the 78 birds entered in the Contest. We do not think that record has ever been duplicated in any American Egg Laying Contest.

The Hill View Farm of Bethany, Missouri, pen of White Leghorns last year in the Georgia Egg Laying Contest was not only high pen but made a new record for Leghorns at the Georgia Contest.

In the English Egg Laying Contests, Ful-O-Pep raised birds made practically a clean sweep, winning almost all of the major prizes—a record which we are sure has never even been approached by birds raised on any other feed. We are happy to add these new records to those of former years made at egg laying contests by Ful-O-Pep raised birds.

*Ful-O-Pep
Helps Cut
Feed Costs*

You may say "I don't expect to enter any chickens in an egg laying contest." But there is one record that you too can make this year and that is raising the finest lot of pullets you have ever raised and doing it at an unusually low feed cost. A good many poultrymen have actually cut their feed cost in two following the Ful-O-Pep Way.

Ful-O-Pep Mashers with their liberal oat-meal content, with their high vitamin values, with their quality of proteins and suitability to go with heavy feeding of grain makes them most economical to use. Decide today to raise your pullets the Ful-O-Pep Way. It may save you as much as $\frac{1}{3}$ to $\frac{1}{2}$ in your feed cost.



*Rhode Island Red Owned by W. C. Mullins,
High Record Hen at the Texas Contest*



A Thrifty Flock of Turkeys Raised by Mrs. W. H. Baumert, Denver, Colorado

Turkeys Profitable to Raise

MANY poultrymen have found turkeys profitable to raise. The same brooding equipment used for your chicks may be used, so turkeys do work in very well with chickens.

*Ful-O-Pep
Produces
Fine Birds*

If you have clean land, away from the chickens, it is fairly easy to raise turkeys. We do not find it wise though to attempt raising turkeys on the same ground year after year or to raise them with chickens. Where turkeys cannot be rotated they may be raised successfully in strict confinement.

The addition of Concentrated Spring Range to Ful-O-Pep Turkey Starter has resulted in a startling improvement. It has increased the growth, reduced the mortality, improved the feathering and made the growth of the birds more uniform. Turkeys require a feed high in vitamins.

If you are planning to raise a flock of turkeys, be sure to write for our free turkey folder. We discuss the proper care and feeding of poults in this folder.

FUL-O-PEP PRODUCES SPLENDID GROWTH *"This year we are feeding 500 turkeys on your Ful-O-Pep Feeds and the accompanying pictures will prove their splendid development on your feeds. The average tom weighs 11½ lbs., hens 8½ lbs. at 16 weeks of age."*
Mrs. W. H. Baumert, Denver, Colo.

Better Prices for Eggs

ARE you and your family using an adequate number of eggs in the diet to keep in good physical condition? Are you producing a quality product by proper feeding and keeping the hens in semi-confinement? Are you helping boost egg consumption by marketing your eggs in attractive and convenient packages?

Eggs produced on Ful-O-Pep Feeds fed the Ful-O-Pep Way make without a question one of the finest foods in the human diet. They are rich in vitamins, rich in proteins, rich in essential minerals and what really counts, they taste good.

At the Poultry Industry Exposition in New York City, November 1938 a dozen of Ful-O-Pep Eggs won the highest award as the best dozen of white eggs in the show. The judges gave this dozen of eggs a perfect score on interior quality.

You, of course, must do your part to retain the original goodness of Ful-O-Pep Eggs. Keep poultry house and nests clean and dry. Gather eggs at regular intervals and hold them in a cool, damp place until they go to market.

As a poultryman you should constantly strive to improve the quality of the eggs that you market and find ways and means to increase the per capita consumption of eggs. Your profit from the flock depends on it.

We must make the consumer egg-conscious by putting them up in attractive packages. The Ful-O-Pep Egg Carton is printed in two colors and has real consumer appeal. Furthermore it is easily and quickly assembled by hand—no special machine or block is needed.

We have arranged to sell these cartons to Ful-O-Pep feeders at a very special price of \$10.00 per thousand. This is much lower than you can buy a carton of the same quality direct from the manufacturer. Orders of 250 or more cartons will be accepted at this price. Please remit the cash with the order. Send your orders to The Quaker Oats Company, Chicago, Ill.

*Ful-O-Pep
Eggs Are
Rich in
Nutrients*

*Ful-O-Pep
Carton Is
Attractive*



*Attractive, safe, easy to assemble, dark blue carton, \$10.00 per thousand.
Order your cartons today.*



A Promising Lot of Pullets Owned by T. L. Walden, Memphis, Tennessee

Gizzard Ulcers in Chicks

FOR many years we were unable to understand why some flocks were so uneven, why some chicks failed to feather, why some had rickets and why some developed depraved appetites. Some chicks would actually load up on litter, grit or sand. If this condition had been true of most of the flock instead of individual birds, one might figure it was the feed.

Science within the last two years found the answer to this problem. These chicks have gizzard ulcers. Actually, while the chicks are still in the shell, the lining of their gizzards do not develop properly. The cause for poor gizzard development consequently is traceable to the parent stock.

*Ulcers
Hinder
Digestion*

Chicks that are hatched with well developed lesions or ulcers cannot properly handle their feed. Apparently the feed material is pushed through the gizzard too rapidly for the proper assimilation of the fats and the proteins. This may mean that there is a failure in the digestion of the fat soluble vitamins A and D so the chicks are apt to develop colds or rickets. With a failure in protein digestion the birds do not feather properly and the kidneys are quite apt to be injured.

If you will cut open poorly feathered chicks, that is chicks which have down on the back and over the breast, while the rest of the body is feathered, especially if they are potbellied and sleepy-eyed, you will almost always find upon washing out the contents of the gizzard, the lining is rather yellow in

appearance, and there are rough and ulcerated spots that go right through the lining. Due to the fact that the feed is pushed through the gizzard so quickly there is apt to be intestinal injury from the fiber resulting in hemorrhages which may be confused with coccidiosis.

*Feed
Fiber
Heavily*

Apparently the best way to fight this condition in young chicks is to feed them rather heavily on fiber. In cutting open chicks you may find them loaded with fiber. It doesn't mean that it killed the chicks. The chicks eat the fiber in the attempt to hold the food material longer in their gizzard. In those parts of the country where straw or oat hulls are used for litter we find the losses from gizzard lesions much less than where the chicks are on wire or on sand. Material that will stay in the gizzard and hold the other food seems to be of definite value in correcting the trouble.

We have tried adding oat feed, which is a by-product in the manufacture of rolled oats, to the extent of 10 and 20 per cent to Ful-O-Pep Chick Starter and have actually increased the speed of growth and decreased feed consumption at the same time. Oat hull litter apparently is just as satisfactory.

*Add Oat
Feed to
Ration*

If you have experienced trouble with poor feathering and poor growth, we would recommend feeding whole oats by the time the chicks are four or five weeks old. It is quite amazing the difference in the color of the gizzard lining when the chicks are adequately fed oats or oat fiber. Work at the University of Wisconsin would indicate that bran is next to oats as a source of the anti-gizzard lesion factor.

It is our belief that gizzard ulcers have been one of the primary causes for the heavy losses in chicks and poultrymen have blamed everything from chicks to feed for it.

*Oyster Shell
Meal May
Be Helpful*

Chicks that have gizzard lesions and are not able to handle Vitamin D, that is oil, though they can absorb it readily from the sunshine, are frequently helped by being fed some oyster shell meal. Chicks that have gizzard ulcers should be gotten outdoors if at all possible and fine oyster shell meal sprinkled over the starter or else put in a dish where they can help themselves. With normal chicks we believe better results will be obtained if oyster shell is not fed.

FUL-O-PEP HELPS BEGINNERS SUCCEED

"They say I had beginners luck with the 200 White Leghorn Chicks I bought March 30, 1937 but the truth is I started my chicks on Ful-O-Pep Chick Starter and followed the Ful-O-Pep feeding program to the letter. I still have 91 hens from these chicks that started to lay at six months and have layed an average of better than 65% to date with no signs of letting up. These hens have never been wormed or vaccinated. This year I am raising twice the number of chicks with equal success."
T. L. Walden, Memphis, Tennessee.



Raised the Ful-O-Pep Way by Sam Hill, Calumet, Michigan

How to Correct Chick Troubles

BRONCHITIS—It is not at all uncommon for a flock of chicks to develop a case of sniffles or have difficulty in breathing when they are a week old. Unless care is taken, the mortality can run pretty high. When bronchitis gets onto a farm, it is quite apt to spread from one lot of chicks to another.

For treatment we would handle the chicks as though they had colds. Decidedly restrict the amount of feed they are given. Since chicks with their noses filled have a good deal of difficulty eating a dry mash, we would recommend moistening the Ful-O-Pep Chick Starter and feed it lightly two or three times a day. At night give them a light feeding of Chick Feed. Most poultrymen make the mistake of trying to stuff a bird that does not want to eat, with fatal consequences oftentimes.

Chicks that are hungry and active, especially if they are running outdoors and getting air and sunshine, plus bugs and grass, will very often throw off bronchitis with little mortality. Spraying with some inhalant may be helpful, though none of them seem to give uniform results.

CANNIBALISM—Cannibalism is primarily a feeding problem. It may partly be due to the method of feeding but is primarily due to the feed

FINDS FUL-O-PEP WAY ECONOMICAL "I have used Ful-O-Pep Feeds for the past four years for my baby chicks. I have found the Ful-O-Pep Feeding Program the most economical to follow, as I have had less mortality, a very high percentage of hatchability and better developed birds than on any other feeds I have used. Thanks to Ful-O-Pep Feeds and Feeding Program, I have been able to realize a nice profit from my flock of 600 pullets." Sam Hill, Calumet, Michigan.



Carl Eastland, Davenport, Iowa, Can Be Proud of this Flock

itself. High temperatures and crowding make it a more severe test for the feed than if chicks are properly brooded. With the feeding of Ful-O-Pep Mashers with their liberal oatmeal content, the feeding of granite grit, the use of oat hull litter, and the feeding of whole oats at a fairly early age cannibalism has been eliminated on most farms.

COCCIDIOSIS—Coccidiosis seems to be the “pet peeve” of many chicken men. Every time that a bird becomes pale in color, particularly if the beak and the shank tend to bleach out, the feeling is that the bird has coccidiosis. Over feeding, too hot brooders, the lack of granite grit, insufficient fiber in the feed, all tend to bring on this condition.

We are confident that if you will try oat hull litter for the first three weeks and will feed a granite grit that the chicks will really eat and avoid over feeding and overheating you will have much less trouble with coccidiosis than you have ever had in the past.

Coccidiosis may be of two types—one due to mechanical injury that may come as the result of gizzard ulcers or to feeding the birds things like grass without giving them grit to grind up the grass, and the other seems to be due to lime-feeding and the low acid condition of the gizzard. Recently the University of Wisconsin pointed out that an excess of lime in the feed tends to make a chicken susceptible to coccidiosis. Actually oats will develop a higher degree of acid in the gizzard than other grains. Restricted feeding and allowing the birds to empty the

FUL-O-PEP PRODUCES STURDY BONES “Our chickens are typical of the kind of feed we use. Ful-O-Pep Chick Starter produces sturdy bones. Growing Mash gives uniform growth and assures one of a flock of fine chickens which are the pride and joy of any poultry raiser.” Carl Eastland, Davenport, Iowa.



Young Stock on the Farm of Mathias Rausch, Blooming Glen, Pennsylvania

gizzard also develops a degree of acid in the gizzard, which is undoubtedly nature's way of protecting a chicken against parasitic invasion.

CONSTIPATION—One of the big causes for losses in baby chicks is constipation. A poultryman seeing a white discharge on the chick's abdomen naturally assumes that the chick has white diarrhea. We think that in the majority of cases, this is urine on the abdomen, due to the chick being thoroughly constipated.

If you will watch the tails of your chicks, you can readily tell if they are becoming constipated. When a chick is constipated, the tail tends to point down. When the chick is in good physical condition, the tail is up in the air.

One of the very quick ways to stop constipation is to feed chicks molasses at the rate of a pint to sixteen quarts of water; use this as the sole drink for one day. However, we believe that the most effective way of stopping the constipation or preventing it, in addition to keeping temperatures down, is to let the chickens become hungry—really hungry. Let them get hungry enough so that they know who feeds them. They will apparently clean themselves out, and you will be amazed at how much brighter they are the following day. Watch that you don't over-feed them just because they have good appetites. It rarely pays to give a growing chick all the grain it will eat at night, unless it is a week or two before it goes to market.

8 YEARS ON FUL-O-PEP "I have been feeding Ful-O-Pep Feeds for the past 8 years and there is no question in my mind as to the value of an oatmeal base feed. Ful-O-Pep feeds develop strong, healthy chicks and keep layers in good physical condition with high egg production and low mortality." Mathias Rausch, Blooming Glen, Pennsylvania.

RANGE PARALYSIS—There is a fairly large group of conditions that frequently cause a good deal of mortality that are grouped together under the name “range paralysis.” Such birds may become blind, they are apt to drag a leg or a wing; have big livers, tumors, and the mortality is usually quite high in the laying house.

Just because you have one lame bird don't think that your flock necessarily has range paralysis. The bird may have dislocated, or injured its leg. If you find more or less of all of these symptoms in different birds in the flock, plus the high mortality, you will unquestionably be correct in assuming that you have range paralysis in your flock.

Range paralysis may be fought in two ways. Some stock is very much more resistant to it than others. One of the best ways of fighting it is to buy stock that is particularly resistant to it; just as you would buy beans that are resistant to rust or grains that are resistant to rust.

The second way to fight range paralysis is by properly growing the young stock. We find that if the stock is grown slowly and not overfed and given a lot of oats, there is a great deal less mortality from range paralysis. If you will follow the directions in this book for feeding and management carefully, you will reduce your mortality from range paralysis quite materially.

WORMS—Worms have been and still are a very serious pest on a great many poultry farms. If you are doubtful about having worms in the pullet flock, examine the droppings carefully. The segments of the tape worm will be found in fresh, warm moist droppings. It seems to be relatively easy to get rid of tape worms. If you will follow the Ful-O-Pep Feeding Program of restricting the feed for the young stock one or two days a week, and feed more oats than anything else, we are confident you will find your pullets will be practically free of tape worms. Many poultrymen have found that when they did not follow this program, they have had quite a severe infestation of tape worms.

If you find a number of tape worm segments in the droppings try feeding approximately five to six pounds of oats at night, plus granite grit, to the hundred pullets for one to two weeks. You can rather quickly drive the tapes out of the birds this way. We do not know of any feeding method yet whereby we can control round worms.

The purpose of this little book is to help you be a more successful poultryman by passing on to you profitable information collected at our Ful-O-Pep Experimental Farm. We hope that you refer to it frequently; that it helps you to increase your profits and cut feeding costs; that it makes poultry raising easier and more pleasant for you, and eliminates many of the difficulties you may have had in the past.

Your Ful-O-Pep dealer is anxious to serve you. Remember to see him today, and start now to enjoy greater profits by using Ful-O-Pep feeds.



PLAN TO ATTEND THE WORLD'S POULTRY CONGRESS

CLEVELAND, O. JULY 28-AUG. 7. - 1939

STARTING over twenty years ago the World's Poultry Science Association began holding meetings every third year to exchange views and information regarding their industry. From this beginning grew the World's Poultry Congress. This will be the first time it is held in the United States.

Plan now to attend. With leading poultry authorities from all over the world giving lectures, with a tremendous display of the latest in equipment, feed and supplies, with leading poultry breeders from all over the world exhibiting, you cannot afford to miss this big event. It will bring together every type of person who is interested in the poultry industry.

Remember the dates, Cleveland, Ohio, July 28 to August 7, 1939.

